

Mineral Industry Surveys

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NICKEL IN JUNE 2005

Reported domestic nickel consumption in June, on a daily average basis, was 13% greater than that of May (revised), according to the U.S. Geological Survey. Daily average nickel consumption of cathodes, pellets, briquets, powders, and ferronickel for stainless steel was 62.6 metric tons per day (t/d), 4% greater than the 60.0 t/d (revised) for May, but 14% less than the 72.5 t/d (revised) for June 2004. Consumption of >99.8% nickel metal to make superalloys (such as INCONEL 718 and WASPALOY) increased by 7% from May levels, on a daily average basis. Consumption to make corrosion-resistant, less stress-resistant nickel-base alloys (such as INCONEL 600 and Nickel 200) also strengthened, increasing by 15% on a daily average basis. Sales to plating companies averaged 32.6 t/d, about 48% greater than the May sales figure of 22.0 t/d.

On June 30, U.S. consumer stocks of cathode, pellets, briquets, and powders totaled 1,450 metric tons (t), down 10% from the revised figure of 1,610 t for May 31, but slightly greater than the 1,420 t reported for December 31, 2004. Stocks in London Metal Exchange (LME) warehouses totaled 7,032 t on June 30, 13% less than the 8,064 t on May 31.

The United States imported 63,200 t of primary nickel in the first 5 months of 2005, 13% greater than the 56,100 t for the corresponding period of 2004. Trade data for June will appear in a subsequent report.

On October 11, 2005, Inco Limited (Toronto, Ontario, Canada) announced that the company was launching a friendly takeover of its long-time competitor, Falconbridge Limited (Toronto, Ontario, Canada). The Board of Directors of Falconbridge has agreed to support the takeover. Falconbridge shareholders will be offered Can\$34.00 in cash for each Falconbridge common share. Instead of the Can\$34.00, Falconbridge shareholders can opt to receive 0.6713 of an Inco common share plus Can\$0.05 in cash. (The final terms of the offer may have to be adjusted due to financial and contractual technicalities.) The combined organization will retain the name, Inco Limited (Falconbridge Limited and Inco Limited, 2005). The new company would be the largest nickel producer in the world. The acquisition would move Inco ahead of the current leader, MMC Norilsk Nickel (Moscow, Russia). See text table.

NICKEL: WORLD FINISHED PRIMARY PRODUCTION IN 2004,
BY COMPANY

Company	2004 production (metric tons of contained Ni)
Inco Limited* and Falconbridge Limited	323,000
MMC Norilsk Nickel	243,000
BHP Billiton Plc (combined with Ni West)	143,000
Jinchuan Group Limited	71,000
Sumitomo Metal Mining Co., Ltd.	56,000
Eramet Group	55,000
OM Group/Outokumpu Oyj	53,900
Anglo American plc	46,600
Sheritt International Corp./ Metals Enterprise	31,800
Others	237,000
World total	1,260,000

*Includes total output of Inco TNC Ltd. (formerly Tokyo Nickel Co., Ltd.)

The acquisition should simplify nickel mining and processing at the Sudbury complex in northern Ontario. For about 75 years, Falconbridge and Inco have operated a number of adjoining mines and processing facilities on the perimeter of the Sudbury Basin. By integrating operations, the combined company will be able to optimize the delivery of feeds to various processing facilities and to maximize metals recovery and production from available processing capacity. Inco and Falconbridge estimate that they will be able to achieve about \$350 million per year in synergies. Further efficiencies and synergies are expected as integration proceeds. These opportunities are not only in Sudbury, but in other areas, such as Falconbridge's Raglan Mine in Quebec and Inco's Voisey's Bay operation in Labrador, where opportunities to achieve economies of scale and to reduce logistical costs may be available. In September 2005, Inco produced its first nickel and copper concentrates at Voisey's Bay (Inco Limited, 2005).

References Cited

- Falconbridge Limited and Inco Limited, 2005, Inco launches friendly take-over offer to acquire Falconbridge: Toronto, Ontario, Canada, Falconbridge Limited and Inco Limited joint press release, October 11, 5 p.
Inco Limited, 2005, Inco produces first nickel concentrate at Voisey's Bay: Toronto, Ontario, Canada, Inco Limited press release IN 05/21, September 15, 2 p.

TABLE 1
CONSUMPTION OF NICKEL (EXCLUSIVE OF SCRAP), BY FORM AND USE¹

(Metric tons, nickel content)

Period	Cathodes, pellets, briquets, and powder	Ferronickel	Oxide-sinter, salts, and other forms	Total	Total year to date
2004:					
June	5,260	556	39	5,850	33,000
July	4,820	536	43	5,400	38,300
August	4,880	677	36	5,590	43,900
September	4,570	549	48	5,170	49,100
October	5,110	734	41	5,890	55,000
November	4,640	504	37	5,180	60,200
December	4,550	482	36	5,070	65,200
January-December	58,200	6,600	461	65,200	XX
2005:					
January	5,020	589	40	5,650	5,650
February	4,870	534	38	5,440	11,100
March	4,870	533	38	5,440	16,500
April	5,280	500	45	5,830	22,400
May	4,920 ^r	551	36	5,510 ^r	27,900 ^r
June:					
Steel:					
Stainless and heat resisting	1,320	560	W	1,880	11,400
Alloy (excludes stainless)	W	--	--	W	1,520
Superalloys	1,030	--	W	1,030	6,150
Copper-nickel alloys	W	--	--	W	W
Electric, magnetic, and expansion alloys	14	--	--	14	77
Other nickel & nickel alloys	W	--	W	W	W
Cast iron	W	--	--	W	W
Electroplating (sales to platers)	979	--	--	979	4,990
Chemical and chemical uses	W	--	--	W	W
Other uses	2,100	--	39	2,140	9,710
Total reported	5,440 ²	560	39	6,030	33,900
Total all companies (calc) ³	XX	XX	XX	11,300	63,800
2005: January-June	30,400	3,270	237	33,900	XX
2004: January-June	29,600	3,120	217	33,000	XX

^rRevised. W Withheld to avoid disclosing company proprietary data; included in "Other uses" category. XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Of consumption, 4,470 metric tons were consumed as cathodes and pellets, the remainder as briquets and powder.

³Figures represent calculated apparent consumption; based on the revised proportion of reported primary consumption (53.17%) to apparent primary consumption for 2003.

TABLE 2
ENDING STOCKS OF NICKEL (EXCLUSIVE OF SCRAP) HELD BY CONSUMERS,
BY FORM AND USE^{1,2}

(Metric tons, nickel content)

Period	Cathodes, pellets, briquets, and powder	Ferronickel	Oxide-sinter, salts, and other forms	Total
2004:				
June	1,470	185	45	1,700
July	1,260	147	30	1,440
August	1,490	139	32	1,660
September	1,640	184	31	1,860
October	1,390	146	50	1,590
November	1,340	170	59	1,570
December	1,420	147	45	1,610
2005:				
January	1,460	192	52	1,700
February	1,510	227	70	1,800
March	1,850	221	45	2,110
April	1,520	184	49	1,750
May	1,610 ^r	198	55	1,860 ^r
June:				
Steel (stainless, heat resisting and alloy)	614	196	(3)	810
Nonferrous alloys ⁴	798	20	(3)	818
Foundry (cast irons)	(3)	W	--	(3)
Chemical (catalysts, ceramics, plating salt, etc.) and unspecified uses	33	W	38	71
Total	1,450	216	38	1,700

^rRevised. W Withheld to avoid disclosing company proprietary data. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Stocks held by companies that consume nickel in more than one end use category are credited to the major category. Stocks are subject to revisions owing to inventory adjustments.

³Included in the "Chemical and unspecified uses" category.

⁴Includes superalloys, nickel-copper and copper-nickel alloys, permanent magnet alloys, and other nickel alloys.

TABLE 3
CONSUMPTION AND ENDING STOCKS OF PURCHASED SECONDARY NICKEL, BY USE¹

(Metric tons, nickel content)

Period	Consumption			Stocks		
	Ferrous scrap ²	Nonferrous scrap ³	Total scrap	Ferrous scrap ²	Nonferrous scrap ³	Total scrap
2004:						
June	6,330	808	7,140	3,690	85	3,770
July	6,100	676	6,770	3,580	76	3,650
August	6,260	960	7,220	3,350	73	3,420
September	5,640	816	6,450	3,740	75	3,810
October	6,100	713	6,820	3,770	70	3,840
November	5,950	740	6,690	3,550	63	3,620
December	6,430	585	7,010	3,320	65	3,390
January-December	75,100	9,330	84,400	XX	XX	XX
2005:						
January	5,720	680	6,400	2,330	80	2,410
February	4,680	774	5,460	2,440	90	2,530
March	4,510	832	5,340	2,490	106	2,600
April	4,930	796	5,730	2,510	106	2,620
May	3,790	808	4,590	2,620	106	2,730
June	4,520	729	5,250	2,810	128	2,940
January-June	28,200	4,620	32,800	XX	XX	XX

XX Not applicable.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Nickel content is calculated from an average nickel content and the reported gross weight of scrap.

³Combined consumption and stocks of aluminum-base, copper-base, and nickel-base scrap.

TABLE 4
U.S. IMPORTS FOR CONSUMPTION OF NICKEL, BY COUNTRY¹

(Metric tons, nickel content)²

Period and country of origin	Cathodes pellets, and briquets	Powder and flakes	Ferro-nickel	Metal-lurgical-grade oxide	Waste and scrap	Stainless steel scrap	Chemicals	Total ³	Total year to date ⁴	Wrought nickel
2004:										
May	8,530	564	941	--	698	680	381	11,800	65,200	55
June	9,190	732	978	--	553	680	324	12,500	77,600	86
July	7,370	914	1,070	--	624	663	374	11,000	88,600	79
August	9,770	800	1,020	24	585	928	434	13,600	102,000	116
September	6,590	571	1,080	207	689	697	339	10,200	112,000	88
October	11,100	976	1,280	210	535	780	321	15,300	128,000	43
November	9,140	659	1,240	240	602	696	378	13,000	141,000	33
December	9,380	814	1,730 ^r	170	403	1,340	295	14,100	155,000 ^r	46
January-December	107,000	9,220	13,900 ^r	1,210	7,850	11,000	4,440	155,000	XX	796
2005:										
January	9,040	756	1,940	114	585	780	279	13,500	13,500	40
February	10,200	596	2,040	122	524	853	360	14,700	28,200	95
March	7,600	1,010	1,950	488	629	750	334	12,800	40,900	81
April	11,100	813	1,820	325	515	1,070	316	16,000	56,900	65
May:										
Australia	555	--	--	--	--	--	--	555	4,830	--
Brazil	--	--	--	--	--	--	--	--	29	--
Canada	4,710	452	--	255	190	473	--	6,080	31,100	(5)
Colombia	--	--	250	--	--	50	--	300	1,630	--
Dominican Republic	--	--	907	--	--	--	--	907	6,760	--
Finland	140	97	--	--	--	--	151	388	1,810	--
France	81	--	--	--	85	5	21	192	921	3
Germany	--	6	--	--	24	--	82	112	466	56
Japan	--	16	--	(5)	18	--	49	83	223	1
Mexico	--	--	--	--	31	281	2	314	1,160	--
New Caledonia	--	--	100	--	--	--	--	100	500	--
Norway	1,350	--	--	--	--	3	--	1,350	6,780	2
Russia	2,030	220	--	--	--	--	--	2,250	10,300	--
South Africa	--	40	--	--	--	--	--	40	260	--
Sweden	--	1	--	--	--	--	--	1	8	--
United Kingdom	4	26	--	1	107	--	8	146	1,110	1
Venezuela	--	--	--	--	12	4	--	16	75	--
Zimbabwe	94	--	--	--	--	--	--	94	790	--
Other	187 ⁶	8	--	1	128	15	94	433	1,510	12
Total	9,140	866	1,260	257	595	831	407	13,400	70,300	75
2005: January-May	47,100	4,040	9,010	1,310	2,850	4,280	1,700	70,300	XX	356
2004: January-May	44,500	3,760	5,530	357	3,860	5,200	1,980	65,200	XX	306

^rRevised. XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²The nickel contents are assumed to be as follows: metallurgical-grade oxide (77%), waste and scrap (50%), and stainless steel scrap (7.5%). The chemicals category includes chlorides (25%); sulfates (22%); other salts (22%); supported catalysts (22%); and oxide, sesquioxide, and hydroxide (65%).

³Excludes wrought nickel.

⁴May include revisions for prior months.

⁵Less than 1/2 unit.

⁶All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau.

TABLE 5
U.S. EXPORTS OF NICKEL, BY COUNTRY¹

(Metric tons, nickel content)²

Period and country of destination	Cathodes pellets, and briquets	Powder and flakes	Ferro- nickel	Metal- lurgical- grade oxide	Waste and scrap	Stainless steel scrap	Chemicals	Total ³	Total year to date	Wrought nickel
2004:										
May	54	127	23	4	1,290	3,100	323	4,920	22,400	120
June	187	138	3	4	1,310	4,720	567	6,930	29,400	65
July	18	171	(4)	2	1,160	2,600	473	4,420	33,800	100
August	39	172	--	1	1,190	2,330	200	3,940	37,700	68
September	112	238	--	7	1,170	2,610	498	4,640	42,400	86
October	60	257	1	2	1,110	3,620	197	5,240	47,600	44
November	77	257	1	45	890	2,530	285	4,080	51,700	42
December	27	196	23	98	1,030	2,980	227	4,580	56,300	95
January-December	972	2,130	68	201	12,400	35,900	4,630	56,300	XX	1,110
2005:										
January	37	211	1	161	1,230	2,400	228	4,270	4,270	63
February	31	165	3	3	877	3,960	316	5,360	9,620	57
March	91	160	12	7	1,070	3,990	289	5,630	15,200	131
April	82	190	6	4	902	5,710	344	7,230	22,500	104
May:										
Australia	--	1	--	--	68	--	12	81	280	--
Belgium	--	(4)	--	--	--	2	--	2	118	--
Canada	1	293	5	--	535	198	120	1,150	5,630	6
China	--	1	--	--	8	1,130	18	1,150	6,740	4
Finland	--	--	--	--	--	452	63	515	2,510	--
Germany	--	15	--	(4)	15	30	(4)	60	336	10
India	--	--	--	--	9	333	1	343	1,550	(4)
Italy	--	2	--	--	--	--	(4)	2	22	2
Japan	--	6	6	2	20	55	51	140	508	13
Korea, Republic of	--	6	--	--	--	247	13	266	2,330	3
Mexico	82	4	--	--	--	158	7	251	2,660	3
Netherlands	--	(4)	--	--	19	21	9	49	227	1
South Africa	--	--	--	--	--	--	18	18	61	1
Spain	(4)	--	--	--	--	--	--	(4)	18	--
Sweden	--	--	--	--	32	1	1	34	160	--
Taiwan	--	12	--	--	20	399	6	437	2,360	4
United Kingdom	--	6	--	--	50	43	2	101	584	1
Other	1	27	--	--	1	167	131	327	1,320	81
Total	84	373	11	2	777	3,230	452	4,930	27,400	129
2005: January-May	326	1,100	32	176	4,860	19,300	1,630	27,400	XX	484
2004: January-May	453	704	40	41	4,550	14,500	2,180	22,400	XX	613

XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²The nickel contents are assumed to be as follows: metallurgical-grade oxide (77%), waste and scrap (50%), and stainless steel scrap (7.5%). The chemicals category includes chlorides (25%); sulfates (22%); other salts (22%); supported catalysts (22%); and oxide, sesquioxide, and hydroxide (65%).

³Excludes wrought nickel.

⁴Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF NICKEL ALLOYS, BY COUNTRY¹

(Metric tons, gross weight)

Period and country of origin	Unwrought alloyed ingot	Bars, rods and profiles	Wire	Plates and sheets	Foil	Tubes and pipes	Other alloyed articles	Total	Total year to date
2004:									
May	123	269	494	131	14	231	115	1,380	8,150
June	227	344	517	301	40	136	100	1,670	9,820
July	271	322	504	192	32	140	87	1,550	11,400
August	324	251	496	236	31	89	109	1,540	12,900
September	528	193	440	192	30	317	79	1,780	14,700
October	295	285	477	215	7	148	206	1,630	16,300
November	245	247	624	280	41	246	233	1,920	18,200
December	269	300	588	226	43	106	145	1,680	19,900
January-December	3,000	3,120	5,740	2,590	322	3,060	2,080	19,900	XX
2005:									
January	273	220	600	234	35	67	304	1,730	1,730
February	329	255	422	257 ^r	49	175	202	1,690	3,420
March:	361	294	629	316	16	103	173	1,890	5,320
April	241	338	486	274	33	143 ^r	176	1,690	7,010
May:									
Australia	150	--	(2)	--	--	--	(2)	150	489
Belgium	20	--	(2)	1	--	--	--	21	52
Canada	--	--	7	--	(2)	20	11	38	188
China	--	--	(2)	1	--	--	30	31	325
France	--	(2)	181	14	--	5	1	201	884
Germany	65	111	262	293	43	44	1	819	3,950
Italy	--	152	1	--	--	--	14	167	706
Japan	--	--	3	5	--	10	1	19	84
Mexico	(2)	--	--	--	--	--	22	22	74
Netherlands	--	--	(2)	--	--	20	14	34	109
South Africa	43	--	--	--	--	--	--	43	179
Sweden	--	48	191	6	--	20	--	265	1,150
United Kingdom	13	37	3	2	(2)	21	7	83	390
Other	19	7	14	2	--	8	51	101	415
Total	310	355	662	324	43	148	152	1,990	9,000
2005: January-May	1,510	1,460	2,800	1,410	176	637	1,010	9,000	XX
2004: January-May	837	1,180	2,090	953	98	1,870	1,120	8,150	XX

^rRevised. XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 7
U.S. EXPORTS OF NICKEL ALLOYS, BY COUNTRY¹

(Metric tons, gross weight)

Period and country of destination	Unwrought alloyed ingot	Bars, rods and profiles	Wire	Plates and sheets	Foil	Tubes and pipes	Other alloyed articles	Total	Total year to date
2004:									
May	457	976	168	334	46	119	543	2,640	11,800
June	511	722	130	427	33	170	272	2,270	14,100
July	614	1,100	177	350	11	132	244	2,630	16,700
August	629	760	176	234	10	123	221	2,150	18,800
September	1,010	1,080	169	389	16	163	257	3,090	21,900
October	517	776	190	390	26	178	236	2,310	24,300
November	613	1,110	183	327	21	148	256	2,660	26,900
December	823	1,100	157	350	5	150	244	2,830	29,700
January-December	7,510	10,400	1,850	4,470	244	1,800	3,440	29,700	XX
2005:									
January	994	1,180	84	312	11	226	186	2,990	2,990
February	910	1,050	104	392	10	163	278	2,910	5,900
March	1,200	1,350	178	388	7	200	404	3,730	9,630
April	499	1,350	135	340	8	190	281	2,800	12,400
May:									
Australia	--	(2)	1	(2)	--	1	(2)	2	38
Belgium	29	239	37	1	--	4	8	318	1,790
Canada	15	55	20	44	2	29	22	187	905
China	1	69	1	28	(2)	3	38	140	946
France	306	236	3	17	(2)	1	2	565	2,090
Germany	8	77	16	14	(2)	3	9	127	595
India	38	1	1	2	(2)	4	2	48	195
Ireland	(2)	--	(2)	1	--	(2)	(2)	1	34
Israel	2	95	3	3	--	1	1	105	464
Italy	8	69	1	7	(2)	--	(2)	85	699
Japan	774	63	(2)	13	(2)	8	2	860	3,280
Korea, Republic of	1	30	1	36	(2)	2	1	71	315
Mexico	(2)	32	55	34	(2)	32	134	287	1,430
Netherlands	--	3	--	6	--	26	2	37	134
Singapore	3	4	1	4	--	(2)	(2)	12	156
Spain	3	3	--	--	(2)	--	(2)	6	76
Sweden	1	1	--	15	--	--	3	20	81
Switzerland	1	2	(2)	3	(2)	(2)	(2)	6	137
Taiwan	--	9	(2)	18	(2)	30	6	63	177
United Kingdom	(2)	156	7	42	--	9	10	224	1,300
Other	6	27	11	90	1	38	28	201	960
Total	1,200	1,170	158	378	3	191	268	3,370	15,800
2005: January-May	4,800	6,100	660	1,810	39	969	1,420	15,800	XX
2004: January-May	2,790	3,770	668	2,010	122	737	1,710	11,800	XX

XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 8
NICKEL CONSUMPTION IN CAST AND WROUGHT PRODUCTS

	Percent	
	Wrought	Cast
June 2005:		
Stainless and heat resisting steels	96	4
Alloy steels	98	2
Superalloys	89	11
Copper-nickel alloys	97	3
Other nickel-base alloys	100	(1)

¹Less than 1/2 unit.

TABLE 9
NICKEL PRICES

Date	Platts Metals Week				American Metal Market
	Cathode NY Dealer \$/lb.	LME Cash mean ¹ \$/t	LME Cash mean ¹ \$/lb.	18/8 Stainless steel scrap Free market \$/long ton (gw)	18/8 Stainless steel scrap Pittsburgh \$/long ton (gw)
2004:					
Average for month of:					
June	6.063	13,533.523	6.139	1,241	1,208
July	6.990	15,023.295	6.814	1,430	1,402
August	6.320	13,679.524	6.205	1,481	1,560
September	6.112	13,270.909	6.020	1,405	1,470
October	6.523	14,404.286	6.534	1,413	1,470
November	6.488	14,045.455	6.371	1,506	1,562
December	6.286	13,768.810	6.245	1,457	1,523
Yearly average	6.341	13,823.241	6.270	1,427	1,473
2005:					
Average for week ending:					
June 3	8.07-8.23	16,975.625	7.700	1,575-1,625	1,600-1,620
June 10	7.80-8.25	16,692.000	7.571	1,575-1,625	1,600-1,620
June 17	7.79-7.97	16,646.500	7.551	1,575-1,625	1,600-1,620
June 24	7.27-7.87	15,764.000	7.150	1,575-1,625	1,600-1,620
July 1	6.89-7.09	14,695.500	6.666	1,475-1,500	1,600-1,620
July 8	6.83-7.00	14,635.000	6.638	1,425-1,475	1,525-1,550
July 15	7.08-7.30	14,848.000	6.735	1,425-1,475	1,525-1,550
July 22	6.71-7.07	14,495.000	6.575	1,350-1,400	1,525-1,550
July 29	6.66-6.85	14,281.500	6.478	1,275-1,295	1,525-1,550
August 5	6.62-6.80	14,352.000	6.510	1,275-1,295	1,375-1,400
August 12	6.79-6.96	14,855.500	6.738	1,350-1,375	1,375-1,400
Average for month of:					
January	6.748	14,501.250	6.578	1,487	1,513
February	7.065	15,344.625	6.960	1,520	1,513
March	7.510	16,184.524	7.341	1,609	1,563
April	7.480	16,136.429	7.319	1,647	1,685
May	7.920	16,919.750	7.675	1,645	1,629
June	7.564	16,154.432	7.328	1,578	1,610
July	6.820	14,570.833	6.609	1,390	1,538

¹Mean of the cash buyer price and the cash seller and settlement price.

